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The supply of formal agricultural loans in many low-income countries has expanded very rapidly in the past few years. Some countries have experienced increases of 50 to 100 percent in a single year. In most cases these funds have been aimed at facilitating increases in agricultural output. Many governments, along with various aid agencies, have also attempted to direct a sizable portion of these additional funds to the rural poor [1, 11]. A number of country cases can be identified which indicate that augmented credit supplies have supported product output increases, but it is becoming increasingly apparent that relatively little of the additional loanable funds have gone to the rural poor [4, 6, 10].

At least three explanations have been offered for the continued lack of formal credit use among most of the rural poor.[1] Lipton, for example, views the problem as the result of class struggle. He feels that the economically powerful conspire against the poor and deny them access to significant amounts of formal credit. Gonzalez-Vega provides an alternative explanation which focuses on supply allocation problems within financial institutions. He argues that widely used concessional interest rate policies, combined with relatively

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1 Formal credit is defined as funds coming from banks, cooperatives and other officially recognized financial institutions.

large lender loan transaction costs for servicing small or new borrowers, discourage financial institutions from lending more to the rural poor. Many other people present a third explanation which focuses on limited credit demand among the rural poor. They argue that many poor do not seek formal credit because they lack profitable investment opportunities, are not aware of the availability of formal credit, do not know how to use formal credit, or are too timid to request formal loans.

Clearly, all three of these explanations are at least partially valid in many low-income countries. We feel, however, that a fourth explanation, not previously discussed, may also shed a good deal of light on why most rural financial markets do so poorly in providing credit services to the rural poor. Our explanation focuses on differences in borrowing costs among various types of formal borrowers. We argue that these differential borrowing costs strongly affect the willingness of the rural poor to seek loans from formal lenders. We draw on data from several low-income countries to support this argument.

Borrowing Costs

Most credit demand analyses equate the nominal rate of interest charged on a loan with the price of the loan. We feel this assumption is often inappropriate when one tries to analyze rural borrowing behavior in low-income countries. We suggest that a more appropriate "price of credit" is the real net costs incurred by the borrower in acquiring the loan. These borrowing costs (BC) may include three separate elements: the nominal interest payments (NI), additional loan transaction costs incurred by the borrower (TC), and

changes in the purchasing power of money over the loan period (ΔP).[2] That is,

$$BC = NI + TC - \Delta P$$

In most cases the borrower can accurately predict the NC and TC elements of his total borrowing costs. When overall price levels are changing, however, a borrower is forced to subjectively estimate the changes in the purchasing power of money over the life of the loan. The expected change in prices (ΔP^*) probably have a direct relationship to the recent changes in purchasing power of money experienced by the prospective borrowers [2]. The expected borrowing cost (BC^*) used by the prospective borrower in making loan demand decisions would be equal to,

$$BC^* = NI + TC - \Delta P^*$$

Expected borrowing costs will only be equal to the nominal interest charges when other loan transaction costs are nil and borrowers do not expect the purchasing power of money to change over the life of the loan. As will be argued later, it is unlikely that many potential rural borrowers in low-income countries ignore these non-interest rate factors in making loan demand decisions.

Borrower Transaction Costs

Borrowers of small amounts and individuals who do not have prior borrowing experience with a prospective lender may incur relatively large transaction costs to acquire a loan. At least three kinds of borrower transaction costs might be involved. These include: (1) loan charges collected by the lender beyond interest payments through such things as application fees,

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2 If loans are granted and repaid in kind the purchasing power element is not relevant.

forced purchase of other lender services, service fees, bribes, compensatory balances, and closing costs. The lender may also raise the borrower's transaction costs by deducting interest charges in advance or collecting interest on the entire loan even though only part is withdrawn by the borrower. (2) In many low-income countries the rural poor may be forced to negotiate with someone outside the formal lending agency before a loan application is formally reviewed. This individual may be an extension agent, a local official or leader, or a cosigner. In some cases a potential borrower must pay expenses for a technician to visit and inventory the borrower's farm operation. Gifts and bribes may be involved in some of these cases. (3) In many cases, the largest and most important transaction costs are the borrower's time and travel expenses involved in the loan transaction. Many small and new borrowers are required to visit the formal lender a number of times to negotiate the loan, withdraw portions of the loan, and make repayment. Some of these visits may involve waiting in line for long periods and traveling long distances. Lost work time may become quite important, especially when loan transactions are concentrated in planting and harvesting periods when the opportunity costs of the borrower's labor are substantial.

Changes in Purchasing Power of Money

Price increases have been very severe in low-income countries the past few years. The International Monetary Funds reports average weighted changes in consumer prices for all low-income countries in excess of 20 percent per year since 1972. This inflation combined with inflexible nominal interest rate policies have resulted in close to zero or negative real rates of interest

(RI) on most formal agricultural loans in almost all low-income countries.[3] Borrowers in several inflation-riddled countries in Latin America refer to such loans as "sweet money." A borrower who incurs relatively small loan transaction costs is strongly drawn to these sweet money loans. Part of the attraction is the implied income transfer involved in receiving and repaying a loan at negative real rates of interest. An alert borrower can realize this income transfer by investing borrowed funds in real assets or goods which increase in price with inflation, and later sell the goods and repay the lender less purchasing power than was borrowed.

It is unlikely that a borrower adjusts borrowing cost expectation when short-term, unexpected surges of inflation occur. Persistent inflation or deflation, however, undoubtedly cause borrowers to include expected price changes in the calculations of expected borrowing costs.

Farm-Household Level Information

It is difficult to document the relative importance of borrower transaction costs and expected changes in the purchasing power of money in loan demand decisions. We know of no research which reports on how expected changes in the purchasing of money affects borrowing decisions in rural areas. There are also surprisingly few farm-level studies which document borrower transaction costs. We have found only three studies which touch on this issue: one in Bangladesh, another in Brazil, and one in Colombia. Despite the limited

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3 The real rate of interest is defined as being equal to $\frac{1 + NI}{1 + \Delta P} - 1$ where NI is the nominal rate of interest, and ΔP is the annual change in some selected price index.

coverage of these studies, they give some valuable insights into the relative importance and make-up of borrowers' transaction costs.

Bangladesh Case

In the early 1960's, Shahjahan and associates studied credit use among more than 2,500 farmers in what is now Bangladesh. A part of this study gathered information on some of the borrower transaction costs incurred in getting loans from the Agricultural Development Bank of Pakistan. During the period of the study the Bank charged a uniform seven percent nominal interest rate on all loans. Borrowers probably expected the purchasing power of money to be more or less constant since very little change in consumer prices occurred in Pakistan during the early 1960's.

The borrower transaction costs detailed in the study included application fees, form filling fees, loan registration fees, borrower's traveling expenses, costs of "entertaining" people who assisted the farmer in getting the loan, and the opportunity cost of the borrower's time used in negotiating the loan. Unfortunately, the study did not provide information on the average duration of the loans studied. It is likely, however, that the average term of the loans was between 6 and 12 months.

In Table 1, we present information on the actual average loan transaction costs for various loan size groups. We also present calculated interest payments for hypothetical loans of both 6-month and 12-month duration. Borrowers of a 12-month loan are assumed to pay twice as much interest as borrowers of equal amounts for only 6 months. Since transaction costs are more or less fixed for a given loan, the effective annualized cost of borrowing a given amount at a fixed interest rate decreases as the duration of the loan is lengthened.

TABLE 1: Farmer Costs of Borrowing in Bangladesh from the Agricultural Development Bank in 1962-63 by Loan-Size Groups

1	2	3	4	5	6	7	8
Average Size of Loan	Loan Transaction Costs of Loan[1]	Interest Costs if Loan Held for 6 Months[2]	Interest Costs if Loan Held for 12 Months[2]	Interest Costs as a Percent of Total Borrowing Costs for 6 Months	Interest Costs as a Percent of Total Borrowing Costs for 12 Months	Effective Annualized Costs of Borrowing as Percent of Loan for 6 Months[3]	Effective Annualized Costs of Borrowing as Percent of Loan for 12 Months[4]
	In 1963 Rupees[5]			%	%	%	%
50	16.73	1.75	3.50	9	17	74	40
150	25.54	5.25	10.50	17	29	41	24
250	30.70	8.75	17.50	22	36	32	19
350	38.18	12.25	24.50	24	39	29	18
450	43.59	15.75	31.50	27	42	26	17
550	70.62	19.25	38.50	21	35	33	20
650	56.20	22.75	45.50	29	45	24	16
800	67.10	28.00	56.00	29	45	24	15
1000	67.51	35.00	70.00	34	51	21	14
1300	68.58	45.50	91.00	40	57	18	12

Source: Adapted from Shahjahan, p. 77.

1 Includes application fees, form filling and registration fees, costs for travel and entertainment related to acquiring the loan, and value of borrower time spent in negotiating the loan.

2 In 1962-63 the Agricultural DevelopmentBank of Pakistan charged 7 percent annually on all agricultural loans.

3 Columns two plus three divided by column one and multiplied by a factor of two to convert to an annual rate.

4 Columns two plus four divided by column one.

5 In 1963 the exchange rate of rupees for one U.S. dollar was 4.792.

As can be noted in Table 1, interest payments made up less than half the total borrowing costs in most loan-size groups for loans of both six and 12-months duration. For the smallest loan, interest payments made up only nine percent of total borrowing cost on a six-month loan and only 17 percent on a 12-month loan. Interest payments were a much larger part of total borrowing costs for borrowers in the largest loan-size group. On a six-month loan, interest payments made up 40 percent of borrowing costs and 57 percent on a 12-month loan.

The effective annualized costs of borrowing, as a percent of the total amount borrowed, are presented in columns seven and eight of Table 1. As can be noted, the rates drop sharply as the size of loan increases. A borrower of 50 rupees (about $10 U.S.) incurred annualized borrowing costs equal to 74 percent of a six-month loan and 40 percent on a 12-month loan. For the same periods, borrowers of formal loans worth 1,300 rupees (about $270 U.S.) faced effective rates of only 18 and 12 percent respectively.

Brazilian Case

In a 1971 study, Nehman analyzed borrowing costs among a sample of 150 farmers in the State of Sao Paulo, Brazil. Small farmers made up about half the total sample. Approximately one-third of all farmers interviewed had formal loans. The average nominal rate of interest on these formal loans was about 13 percent, but ranged from 7 to 16 percent per year. These rates included a standard service fee which was added to most loans. The borrower's loan transaction costs included loan registration fees, farm appraisal costs covered by the potential borrower, and the borrower's time and travel costs involved in negotiating, acquiring and repaying the loan. As in the Bangladesh

study, Nehman found that for most small and new borrowers, the time lost in negotiating the loan made up a very large part of total borrower transaction costs. He found that many new or small borrowers were required to visit the formal lender 5 to 7 times to complete all loan transactions.

Unlike Bangladesh, borrowers in Brazil were highly sensitized to changes in the purchasing power of money. Annual changes in consumer price indexes have exceeded the nominal interest charges on formal agricultural loans every year for several decades. Between 1960 and 1971, these annual price changes ranged from 20 to 95 percent. An unweighted average of the annual rates of inflation exceed 40 percent over this period. No attempt was made in the Nehman study to measure borrowers' expectations about price changes. It would be very surprising, however, if these expected price changes were less than 20 percent, especially among the economically sophisticated borrower.

The figures in Table 2 summarize the borrowing cost information collected by Nehman. The information is presented by borrower's farm size. As can be noted, the loans were much larger than those reported in the Bangladesh case. Borrowers in the smallest farm-size group acquired an average of 680 cruzeiros ($136 U.S.), while borrowers in the largest farm-size category averaged 6,871 cruzeiros ($1,374 U.S.) in formal loans. Most of the formal loans, especially to small and medium-sized farmers, were for a single crop period of 5 to 6 months. As in the Bangladesh case, we assume two average loan duration periods in order to estimate nominal interest payments. We also assume an average nominal rate of 13 percent in making the interest payment calculations.[4]

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4 Major differences among loan durations, uneven interest and loan repayment schedules, and loan repayment performance made it impractical to use actual interest payments made during the year as a measure of nominal interest charges.

TABLE 2: Farmer Costs of Borrowing from Formal Sources in State of Sao Paulo, Brazil in 1971 by Farm Size Groups

1 Farm Size in Hectares[1]	2 Average Formal Loan Size	3 Avg. Transaction Costs of Getting Loan	4 Nominal Interest Payment on Loans Held for[3] 6 Months	5 Nominal Interest Payment on Loans Held for[3] 12 Months	6 Interest Charges as Percent of Direct Costs of Borrowing 6 Months[4]	7 Interest Charges as Percent of Direct Costs of Borrowing 12 Months[5]	8 Annualized Direct Costs of Borrowing as Percent of Loan Value 6 Months[6]	9 Annualized Direct Costs of Borrowing as Percent of Loan Value 12 Months[7]
	-In 1971 Cruzeiros[2]-				-Percent-			
0-20	680.00	109.00	44.20	88.40	29	45	44	29
21-50	3665.00	178.00	238.23	476.45	57	73	22	18
Over 50	6871.00	144.00	446.62	893.23	76	86	18	15

Source: Adaptation of Nehman, p. 78.

1/ One hectare equals 2.47 acres.

2/ In 1971 one cruzeiro equaled 20 cents U.S.

3/ Assumes that an average nominal interest rate of 13 percent per year was charged on loan.

4/ Column 4 divided by column 3 plus 4.

5/ Column 5 divided by 3 plus 5.

6/ Columns 3 plus 4 divided by column 2 and multiplied by 2 to convert to annual rate.

7/ Columns 3 plus 5 divided by column 2.

The average borrower's transaction costs for getting formal loans, shown in Table 2, are most interesting figures. As can be noted, borrowers in the smallest farm-size group incurred average loan transaction costs equal to 109 cruzeiros to acquire an average loan of 680 cruzeiros. At the same time, borrowers in the largest farm-size group with loans which averaged 10 times more in value incurred average loan transaction costs which were only slightly larger (144 cruzeiros). Some of the largest borrowers in the sample, especially those who had previous dealings with the formal lender, incurred almost no loan transaction costs. In some of these cases a single telephone call from the borrower to the lender and one visit to the bank was sufficient to negotiate the loan.

As in the Bangladesh study the interest charges, as a percent of total direct costs of borrowing, ignoring for the moment the changes in the purchasing power of money, increased with the size of loan. On a six-month loan, interest payments made up only 29 percent of direct borrowing costs while on a 12-month loan they made up 45 percent. At the same time the largest borrowers paid 76 percent and 86 percent respectively of their direct costs of borrowing in nominal interest payments.

The annualized direct costs of borrowing as a percent of loan value varied inversely with loan size. The smallest borrowers faced rates of 44 percent on 6-month loans and 29 percent on 12-month borrowings. The largest borrowers experienced rates of 18 percent and 15 percent respectively. For purposes of comparison, Nehman also researched the costs of borrowing from informal lenders in the area of his study. He found that, although nominal interest charges on informal loans ranged from 3-4 per month, borrowers of informal loans felt they

incurred very little additional transaction costs. He also found that small to medium borrowers were often indifferent as to whether to seek a formal or informal loan because they felt their total costs of acquiring a loan from either source were very similar.

To this point we have ignored changes in the purchasing power of money in calculating borrowing costs in Brazil. It would be quite conservative to assume that most borrowers in Brazil expected price changes of at least 20 percent per year. If this were the case, large borrowers would expect to realize negative real annualized borrowing costs on both 6 and 12-month loans, medium-sized borrowers would expect real borrowing costs to be close to zero, and small borrowers would expect real borrowing costs to be positive and substantial. If one assumes that large borrowers are better able to anticipate inflation than less sophisticated small borrowers, expected price changes among large borrowers may in fact be higher than for small borrowers. In the Brazilian context a large borrower may anticipate inflation will continue at rates of 30 to 40 percent per year. This would make the expected borrowing costs for large borrowers even more highly negative and thus make formal loans more attractive to them.

Colombian Case

Villamil studied credit among 63 farmers in the central part of Colombia. All of the farmers in his sample operated less than 20 hectares of land, and most operated less than 10 hectares. The area studied is typical of many low-income farming areas clinging to the mountain sides in Colombia. The study reports on credit use and costs of acquiring credit for 1972-73. The borrower's loan transaction costs included costs for paperwork, opportunity costs of the

borrower's time used to negotiate the loan, travel expenses incurred by the borrower to negotiate the loan, costs of obtaining a cosigner, and borrower costs to have a technician survey his farm activities. Villamil paid no attention to changes in the purchasing power of money in his analysis. It is highly likely, however, that borrowers expected some decline in the purchasing power of money. Over the 1960-73 period, annual changes in consumer price indexes ranged from 3 to 32 percent in Colombia. An unweighted average change of about 12 percent per year resulted over this period. One might expect borrowers to anticipate inflation rates of at least 5 to 10 percent per year under these conditions.

The study showed that about 30 percent of the number of loans held by the interviewed farmers came from formal sources. These formal loans made up 45 percent of the total amount borrowed by the entire sample. Most of the farmers borrowed from both formal and informal sources. Farmers, nevertheless, were getting much less formal credit than they requested. Their extensive use of informal credit was partly due to lack of formal credit, but also due to the substantial borrowing costs associated with using formal sources. Although nominal interest rates on formal loans only averaged 13 percent, Villamil found these interest payments only made up 30 percent of the costs of borrowing on the average. On an annualized basis, and ignoring expected changes in the purchasing power of money, he found the average borrower incurred total formal borrowing costs equal to 42 percent of the total value of their formal loans. This percentage was only moderately lower than the average 47 percent which borrowers expended in acquiring all loans, both formal and informal. As in the

Bangladesh and Brazilian cases, small and new borrowers experienced higher annualized borrowing costs for their formal loans than did larger borrowers in the sample.

Costs For New Borrowers

The studies by Shahjahan, Nehman and Villamil report on borrowing costs mainly among farmers who have previous formal borrowing experience. One might expect that an individual who has not previously borrowed from a formal lender would face higher loan transaction costs than an established borrower. Furthermore, not all applicants for formal credit receive a formal loan. Many of these unsuccessful applicants incur significant formal loan transaction costs before being rejected. After rejection they may be forced to seek informal loans. The expected borrowing costs of a new formal loan applicant may be increased by these possibilities of formal loan rejection. These rejection costs may be quite important if the probability of getting a new formal loan application approved are relatively low. The information in Table 3 is a hypothetical case which illustrates the importance of these relatively large transaction costs for new borrowers and also the importance of rejection costs. The various assumptions used in the example are based on some empirical results from Nehman's Brazilian study.

We assume in Table 3 that a farmer who has never borrowed from a specific formal lender is interested in a 12-month loan for $100, and that he can be absolutely sure of getting the loan immediately with no additional transaction costs from an informal lender who lives nearby (Option I). The informal lender charges an interest rate, however, of 48 percent per year. At the same time, the farmer also has the opportunity of applying for an identical loan from a

TABLE 3: Hypothetical Options for a New Borrower to Obtain a Small Loan

Assumptions	Option I Informal Lender	Option II Formal Lender	Option III Informal Lender After Formal Rejection
Loan Size	$100	$100	$100
Loan Term	12 months	12 months	12 months
Loan Transaction Costs Before Approved or Rejection	0	$ 16	$ 16
Probability of Getting Loan	1.0	.5	1.0
Nominal Interest Rate	48%	12%	48%
Expected Changes in Purchasing Power of Money	0	0	0
After-Approval Loan Transaction Costs	0	$ 16	0
Effective Annual Borrowing Costs	$ 48	$ 44	$ 64
Expected Borrowing Costs of Option II and/or III			(44+64).5=$54

Source: Adaptation of data collected by Nehman.

formal lender who is located some distance from the farmer (Option II). The interest rate on the formal loan is only 12 percent per year, but the applicant knows that because of excess demand the probability of a new applicant getting a loan is only .5. Furthermore, the applicant knows it will cost him $16 in lost work, travel expenses, and paperwork associated with the loan application before a yes or no decision is made on the loan. The applicant also knows that if the loan is approved it will take another $16 in loan transaction costs to complete the loan, withdraw payments and make repayment. Assuming there is no expected change in the purchasing power of money, the annualized costs of borrowing under Option II, assuming the loan application is approved, is 44 percent per year.

A new loan applicant probably recognizes, however, that only half the new applicants get formal loans. The applicant also understands that he may end up spending $16 to apply for a formal loan, have his application rejected, and end up paying an informal lender $48 to borrow $100. If the farmer is forced into this Option III, his annualized borrowing costs would be 64 percent. Given the assumption in Table 3, the expected annualized costs for a new formal loan applicant who selects Option II and/or III, would be 54 percent of the $100 loan [(44 + 64) x .5]. In this particular example, the farmer would have a lower expected cost of borrowing if he selected the informal lender (Option I) rather than take his chances with the formal lender.

The example in Table 3 can be made much more complex by changing some of the simplifying assumptions. In some cases, for example, the probability of obtaining an informal loan may be less than 1.0, and there also may be informal loan transaction costs for the borrower. Also, the probability of getting an informal loan may decrease if the borrower first applies to a formal lender.

Inflation or deflation expectations might also be added to the example. If loans are made and repaid in cash, expected changes in overall prices would have no effect on the relative desirability of formal versus informal loans, as long as the real costs of borrowing both types of loans were positive. If these two assumptions are not satisfied, the relative attractiveness of the two loan sources might be altered by expected price changes. Other things being equal, expected price increases would make loans made and repaid in kind less desirable.

The relative desirability of borrowing from formal and informal sources can be altered substantially by changing the various assumptions included in Table 3. These assumptions, however, appear to be reasonable at least in the Brazilian context, and show that new borrowers and borrowers of small amounts may be very rational in deciding to use informal credit sources. Nominal interest rates on formal loans may be much less important to these types of potential borrowers than are borrower transaction costs, the dignity and speed with which the lender treats the borrower, the probabilities of getting a loan, and assurances that additional credit will be available in cases of emergency.

Conclusions

The limited scope of the empirical information presented in this article restricts the firm policy recommendations which can be drawn. Additional research is needed to clarify the importance of loan transaction costs and expectations about changes in the purchasing power of money in farmers' loan demand decisions. Some tentative policy conclusions appear warrented, however, to guide future research.

The most important conclusion which we draw from this information is that borrower loan transaction costs above and beyond nominal interest payments may be an important factor discouraging small and new borrowers from using formal loans. These loan transaction costs appear to make up a very large part of borrowing costs for many small and medium-sized borrowers. In relative terms, these loan transaction costs appear to be much less important for large and experienced borrowers. These large borrowers may be much more sensitive to nominal interest charges and expected changes in the purchasing power of money. One should not be surprised in a country like Brazil where inflation pressures are strong and steady, that large experienced borrowers are willing to absorb almost unlimited amounts of concessionally priced loans. Their loan transaction costs per unit of money borrowed are quite small, the nominal interest rates are much lower than the borrower's expectation about future price increases, and the expected borrowing costs for most large and experienced borrowers are negative in real terms. At the same time, one should not be surprised to find small and new formal borrowers much less enthusiastic about using formal credit, even though they may be charged lower nominal interest rates than large borrowers. Paperwork costs, expenses of

visiting the bank a number of times to negotiate the loan, and probabilities that the loan application will be rejected, increase small borrowers expected loan transaction costs and expected total borrowing costs. For these individuals, the borrowing costs of concessionally priced formal credit may be higher than borrowing costs from the much maligned, "usurious" money lender.

The policy implications of major differences among various classes of borrowers in the importance of the various elements of borrowing costs are fairly obvious. Adjustments in nominal interest rates will have a weak direct effect on borrowing costs of small and new borrowers. Changes in loan transaction costs may have a much more important impact on their borrowing decisions. At the same time, loan demand among large and experienced borrowers will be much more sensitive to changes in real rates of interest.

If a society's goal is to reach more rural poor through formal loans, borrower transaction costs must be reduced. Since the opportunity costs and travel expenses are relatively large for small borrowers, initial attention might be directed at reducing travel expenses and the number of visits required. Group loans, mobile banks, and locating small branches of banks in small villages may be partial solutions. In many cases, however, it appears that formal lenders <u>impose</u> substantial loan transaction costs on small and new borrowers as a way of keeping unprofitable business away from the bank. As Gonzalez-Vega has pointed out, concessional interest rate policies on agricultural credit combined with relatively high lender costs of making small loans cause banks to direct loans to large borrowers. Higher nominal interest rates might cause these large borrowers to demand less loans, provide more profit margin for

lenders to service small and new borrowers, and cause lenders to simplify lending procedures so that borrowing costs of small and new lenders were reduced. Under these conditions the formal lender might be forced to adopt some of the borrowing conveniences offered by informal lenders. The net result of increasing nominal interest rates on agricultural loans may be to reduce the formal loan borrowing costs for the rural poor. That is, with higher interest rates lenders may adopt new lending procedures which reduce borrower loan transaction costs more than nominal interest payments increase.

The problems of extending formal financial services to the rural poor in low-income countries are difficult and tenacious. It will take much more than pressure from international agencies, government exhortation, or good intentions on the part of a few formal lenders to resolve these problems. Repayment performance on loans to rural poor must be improved and lender transaction costs of making small loans must also be reduced. Some policies, especially those related to interest rates, must be adjusted so that making small loans to the rural poor is more attractive to formal lenders. We feel that attention also must be focused on making formal loans more attractive to small and new borrowers by reducing borrowers' loan transaction costs. It may be very difficult to do this if governments insist on pursuing low interest rate policies on loans for the rural poor.

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